

REMARKS

The Examiner rejected claims 1-42 under 35 U.S.C. §112, second paragraph, for missing essential elements. The Applicant has amended the claims to positively recite cooperation between different elements of the claims. The Applicant therefore submits that the claims now comply with the second paragraph of §112.

The Examiner rejected claims 1-13 and 30-42 under 35 U.S.C. §103(a) as being unpatentable over Derby in view of Pin. The Examiner rejected claims 14-29 under 35 U.S.C. §103(a) as being unpatentable over Derby in view of Pin and in further view of Kanayama or Mattaboni. The claims recite a transmission roller that is in continuous contact with a drive ball. The roller can actively rotate about a first axis and passively rotate about a second axis. Although the embodiment shown in Figs. 9 and 10 of Derby disclose motor driven rollers, neither roller can passively rotate about a second axis. The lack of passive rotation about a second axis creates a roller assembly that would be energy inefficient, particularly when used in a mobile robot. The lack of passive rotation results in the roller 106 or 109 dragging the rotation of the drive ball. Dragging the drive ball would require additional torque and energy from the drive motor, thereby reducing the energy efficiency of the system. Energy efficiency is particularly important for a mobile robot.

Although Pin discloses a roller that can rotate about a different axis, the Pin rollers are not in continuous contact with a drive ball as recited in the claims. As noted in the background of the above entitled application, discontinuous contact by the transmission rollers can produce wobble in the platform movement. Pin neither discloses nor suggests to create continuous contact between the roller and an adjacent surface. Additionally, Pin does not disclose or suggest to utilize a roller assembly with a main drive ball.

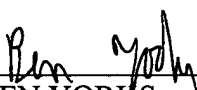
The Applicant has amended independent claims 32, 37 and 42 to recite a roller with an addendum roller attached to a primer roller that together are in continuous contact with the surface. Pin clearly does not disclose nor suggest a roller with an addendum roller attached to a primary roller to create continuous contact with the surface. For this reason the Applicant submits that Pin does not render obvious these claims.

In view of the above it is submitted that the claims are in condition for allowance. Reconsideration of the rejections is requested. Allowance of claims 1-35, 37-40 and 42 at an early date is solicited.

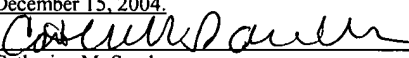
Respectfully submitted,

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Dated: December 15, 2004


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